

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

1957 FEB 11 AM 10:05

Pool Eumont Formation Queen County Lee

Initial _____ Annual _____ Special X Date of Test 8-20 to 8-24-56

Company John M. Kelly Lease Tidewater State "B" Well No. 1

Unit D Sec. 36 Twp. 20S Rge. 37E Purchaser El Paso Natural Gas

Casing 7 Wt. 20 I.D. 6.456 Set at 3598 Perf. _____ To _____

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3663 Perf. _____ To _____

Gas Pay: From 3615 To 3683 L 3663 xG 1675 -GL 2473 Bar. Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well Single

Single-Br Tenhead-G. G. or G.O. Dual

Date of Completion: 6-13-54 Packer 3585 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

No.	Flow Data				Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. (h _w) ²	Temp. °F.	Press. psig	Temp. °F.	Press. psig	
SI						805			72
1.	4	1.250	570	2.8	96	737			24
2.	4	1.250	563	3.8	82	701			24
3.	4	1.250	571	4.4	82	675			24
4.	4	1.250	576	6.3	82	600			24
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	9.643	67.61		.9671	.9427	1.051	625
2.	9.643	91.20		.9795	.9427	1.056	857
3.	9.643	106.33		.9795	.9427	1.056	999
4.	9.643	152.89		.9795	.9427	1.056	1,437
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 Specific Gravity Separator Gas _____
 Specific Gravity Flowing Fluid _____
 F_c 0.936 (1-e^{-s}) 0.156
 P_c 818.2 P_c² 669.5

No.	P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	750.2	562.8	6.2	38.4	6.0	568.8	100.7	754.2	.92
2.	714.2	510.1	8.6	72.3	11.3	521.4	148.1	722.1	.89
3.	688.2	473.6	9.9	98.0	15.3	488.9	180.6	699.2	.85
4.	613.2	376.0	14.3	204.5	31.9	407.9	261.6	638.7	.78
5.									

Absolute Potential: 3,200 MCFPD; n .542

COMPANY John M. Kelly

ADDRESS Box 5871, Roswell, New Mexico

AGENT and TITLE J. R. Blumer Production Superintendent

WITNESSED _____

COMPANY El Paso Natural

REMARKS

EL PASO NATURAL GAS COMPANY

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia

P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressibility factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .